

APPENDIX B

PENDING CLAIMS

- 1                   1. (Twice Amended) A method of increasing the efficiency of transfection  
2 of cycling cells sensitive to high energy electromagnetic radiation, comprising:  
3                   synchronizing at least 30% of said cells at a first stage of the cell cycle by  
4 contacting said cells with high energy electromagnetic radiation, and  
5                   transfected said cells at a second stage of the cell cycle within about one cell  
6 cycle of said first stage with a nucleic acid that encodes a desired gene product.
  
- 1                   2. A method of claim 1 wherein said high energy electromagnetic radiation  
2 synchronizes cells at a stage of the cell cycle when the nuclear membrane is substantially  
3 degraded.
  
- 1                   3. A method of claim 1 wherein said high energy electromagnetic radiation  
2 synchronizes cells at late S phase.
  
- 1                   4. A method of claim 1 wherein said high energy electromagnetic radiation  
2 synchronizes cells at the G<sub>2</sub>/M phase boundary.
  
- 1                   5. A method of claim 1 wherein said high energy electromagnetic radiation  
2 synchronizes cells at a stage other than M phase, and the nucleic acid accumulates in cells that  
3 have cycled to the G<sub>2</sub>/M phase boundary.
  
- 1                   6. A method of claim 1 wherein said first stage and said second stage are the  
2 same.
  
- 1                   7. (Amended) A method of claim 1 wherein said gene product is foreign to  
2 said cells.
  
- 1                   8. (Amended) A method of claim 1 wherein said gene product is toxic to  
2 said cells.

1                   9. (Amended) A method of claim 8 wherein said gene product induces  
2 apoptosis.

1                   10. (Amended) A method of claim 1 wherein said nucleic acid is fully  
2 encapsulated in a lipid-nucleic acid particle.

1                   11. The method of claim 1 wherein said high energy electromagnetic  
2 radiation is a member selected from the group consisting of Gamma rays, X-rays, and ultraviolet  
3 rays.

1                   12. The method of claim 11 wherein said high energy electromagnetic  
2 radiation is X-rays.

1                   46. The method of claim 1, wherein said cells are present within a mammal.